



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D5853-7

Job Sheet 207409



Part No: D5853-7

Part Name: Support



Part Weight: 0 lbs

Job Created: 2/25/20

Due Date: 3/6/20

Type: Stock

Job Qty: 4 pcs

Status: New

Job Tracking No:

Created By: Jennifer Renwick

Description:

POSITIVE RECALL

EFFECTIVE

AUTH

RELEASED

DATE

Priority: Medium

Note: URF 20-522 DWG D5853 Rev A IPP Rev. A 2020.01.30 New issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Hardinge - 1	4 pcs	3/6/20		0.50	0.10	Conventional Lathe - 1		
							Hardinge - 1		IL 20-2-28
110	QC 2	4 pcs	3/6/20		0.00	0.00	QC 2 - 1		
							QC 2 - 12		
							QC 2 - 14		
							QC 2 - 17		
							QC 2 - 19		
							QC 2 - 2		
							QC 2 - 20		
							QC 2 - 22		
							QC 2 - 23		
							QC 2 - 25		IL
							QC 2 - 32		
							QC 2 - 33		
							QC 2 - 35		
							QC 2 - 39		
							QC 2 - 4		
							QC 2 - 40		
							QC 2 - 44		
							QC 2 - 45		
							QC 2 - 48		
							QC 2 - 49		
							QC 2 - 50		
							QC 2 - 51		
							QC 2 - 52		
							QC 2 - 57		
							QC 2 - 62		
							QC 2 - 63		
							QC 2 - 8		
							QC 2 - 66		
							QC 2 - 64		

PRIORITY

Plex 2/26/20 10:03 AM Dart.lajeunesse.marie

120 QC 8	4 pcs	3/6/20	0.00 0.00	QC 2 - 65	
				QC 2 - 5	
				QC 2 - 71	
				QC 2 - 73	
				QC 2 - 69	
				QC 2 - 76	
				QC 8 - 12	
				QC 8 - 14	9m/20/02/29
				QC 8 - 17	
				QC 8 - 20	
				QC 8 - 25	
				QC 8 - 3	
				QC 8 - 32	
				QC 8 - 33	
				QC 8 - 35	
				QC 8 - 39	
				QC 8 - 4	
				QC 8 - 44	
				QC 8 - 45	
				QC 8 - 49	
				QC 8 - 58	
				QC 8 - 8	
				QC 8 - 9	
				QC 8 - 68	
				QC 8 - 67	
130 Packaging 3-1 - Stock - B4B	4 pcs	3/6/20	0.00 0.00	QC 8 - 1 (A)	
				QC 8 - 47	
				QC 8 - 40	
				QC 8 - 52	
				QC 8 - 23	
				QC 8 - 57	
140 QC 21 - SA	4 pcs	3/6/20	0.00 0.00	QC 8 - 76	
				QC 8 - 61	
				Packaging 3 - 1 - B4B	
				Packaging 3 - 2 - B4B	
				Packaging 3 - 3 - B4B	
				Packaging 3 - 4 - B4B	
				Packaging 3 - 5 - B4B	
				Packaging 3 - 37 - B4B	
				QC 21 - SA - 21	
				QC 21 - SA - 70	

Part Op 100 - 1-Machine as per folio FC _____ FOLIO REV: AA DWG REV: A 2-Deburr
 Descriptions: 110 - QC2- Inspect parts off machine FAI/FAIB
 120 - QC8- Inspect parts - second check
 130 - Identify as per dwg & Stock Location: _____
 140 - QC21- Final Inspection - Work Order Release

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M304R0.500	304 SS roundbar .500	.4080 ft (.102 ea)	100-Hardinge - 1	S080895-3.54

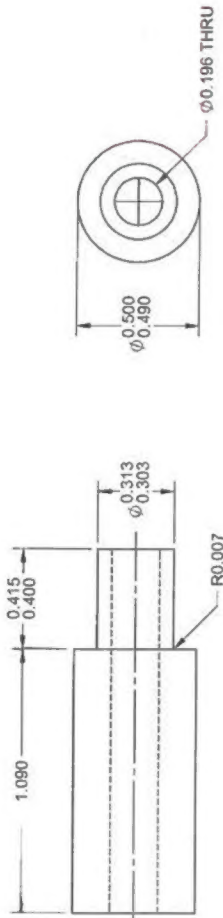
Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Hardinge - 1	M304R0.500	0	34	0

Part Specifications

Specifications could not be found.

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 207409 MJS
2002-26



D5853-7 SUPPORT
(DERIVED FROM AERO DESIGN P/N 70422-05)

UNDER REVIEW
URF 2020-522 20.02.14 (NO)

- NOTES:
- 1) MATERIAL: AISI 304/316 STAINLESS STEEL ROUND BAR
PER ASTM A276 OR ASTM A479
REF DART SPEC M304R
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: 0.06 lbs

RELEASED
2020 FEB 18 W/Q

APPROVED

DESIGN	ZF	DART AEROSPACE LTD
DRAWN	ZF	HAWKESBURY, ONTARIO, CANADA
CHECKED	KPT	DRAWING NO.
MFG. APPR.	DD	D5853
APPROVED	NO	TITLE
DE APPR.	CP	BASKET RIM
DATE	20.01.24	COPYRIGHT © 2020 BY DART AEROSPACE LTD

REV. A
SHEET 5 OF 6
SCALE
NTS

THIS DOCUMENT IS PRELIMINARY AND IS SUBJECT TO THE EXPRESS CONDITIONS OF SALE AND THE TERMS AND CONDITIONS OF THE DART AEROSPACE LTD. POLICY ON PRODUCT LIABILITY INSURANCE.



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO040033**

Supplier: ACI001-VC
Acier Ouellette Inc.
935 Boul. Du Havre
Valleyfield
QC
J6S 5L1 Canada
Phone: 800 667 4248
Fax: 450 377 5696

PO No: PO040033

PO Date: 5/29/18

Due Date: 6/4/18

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Lavoie, Chantal
clavoie@dartaero.com

E-MAILED
MAY 29 2018

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground

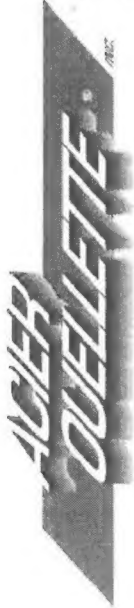
Pynt Terms: Net 30

Freight Terms:

Special Comments:

Items										
Line Item	Part	Supplier Part No	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	M17-4-R0.750		17-4 Round Bar .750 : 17-4 PH / S17400 / TYPE 630 SS ROUND BAR PER AMS 5643/ ASTM A564 GRAIN MUST BE ALONG LENGTH OF BAR MINIMUM YIELD TENSILE STRENGTH = 100 KSI MINIMUM ULTIMATE TENSILE STRENGTH = 150 KSI receive ft	Firmed	6/6/18	36 ft	0 ft	36 ft	\$10.963888/ft	\$394.70
							36'			DAS 11 9-89 JUN 13 2018
2	M304R.500		304 SS roundbar .500 : MATERIAL: AISI 304/316 SS ROUND BAR AS PER ASTM A276 NOTE: AISI 303 NOT ACCEPTABLE receive ft	Firmed	6/1/18	120 ft	0 ft	120 ft	\$2.3345/ft	\$280.14
							127.8'			DAS 11 9-89 JUN 13 2018
3	M6061T6S1.250X6.000		6061T6 PLATE 1.250 X 6.000 : MATERIAL: 6061- T6/T62/T651 ALUMINUM SHEET AS PER QQ-A- 250/11 OR AMS-QQ-A- 250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209 receive ft	Firmed	6/4/18	12 ft	0 ft	12 ft	\$35.68167/ft	\$428.18
							12'			DAS 11 9-89 JUN 13 2018

Line Item Note saw cut pricing included in pricing of mat'l



DELIVERY - CLIENT

Copy

CO00093012

ACIER OUELLETTE INC.

935, Boul. du Havre
Salaberry de Valleyfield (Québec) J6S 5L1
Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248
Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

Customer N°

Date

Delivery date

Your order N°

Processed by

Salesman

Carrier

Credit Terme

Page

Billed to

DART AEROSPACE LTD

1270 , ABERDEEN ST.
HAWKESBURY, Ontario, K6A 1K7

Shipped to

, Ontario,

Att : CHANTAL LAVOIE Tél.: 613-632-5200

Instruction	F-M	Delivery Route	5	Page	1	Product Description	Weight	Qty	U/M	PCS NB			Internal Use Only			
										CMD	EXP	B/O	IN	I	S	C
1		ROUND SS 3/4 17-4PH NS RSS-34174 9268 3 X 12' R/L ** CERTIFICATE ** LINE# 1 AC16977-TH-2018-06-11 Heat : 752410	54.07	36.00	PI_\$CLB	3 X 12' 1"					36'				JUN 13 2018 DAS 11 9-89	
2		ROUND SS 1/2 304 (R) RSS-12 5730 10 X 12' R/L ** CERTIFICATE ** LINE# 2 Heat : 1712154	80.04	120.00	PI_\$CLB	3 X 13' 3" 3 X 13' 3" 3 X 13' 3" 1 X 12'					127.8'				JUN 13 2018 DAS 11 9-89	

NIR : R-109516-6

Next Page...

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M304R.500
DATE: JUN 13 2018

PO / BATCH NO.: 040033/5080895

MATERIAL CERT REC'D: YES
QUANTITY RECEIVED: 128'
QUANTITY INSPECTED: 128'
QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.500
THICKNESS RECEIVED: 0.500
SHEET SIZE ORDERED: N/A
SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT FINISH	<input checked="" type="radio"/> Y <input type="radio"/> N	
CORROSION	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y <input type="radio"/> N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="radio"/> Y <input type="radio"/> N	<u>Astm A276</u>
CORRECT THICKNESS	<input checked="" type="radio"/> Y <input type="radio"/> N	
PHOTO REQUIRED	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y <input type="radio"/> N	<u>Heat # 1712154</u>
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y <input type="radio"/> N	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y <input type="radio"/> N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input checked="" type="radio"/> N <input type="radio"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input checked="" type="radio"/> N <input type="radio"/>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D	WEBSTER
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY: <u>DAS</u>		SIGNED OFF BY: _____	
DATE: <u>11 JUN 13 2018</u>		DATE: _____	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

#5730



CHANDAN STEEL LIMITED

(GOVT. OF INDIA RECOGNISED EXPORT HOUSE)

ISO 9001:2008 CERTIFICATE No. 0110001022

ADM. OFFICE: 504, SURJI NAGAR, N. S. PATKAR MARG, MUMBAI 400 007, INDIA.

Tel.: 91-22-66290600, Fax: 91-22-66290633/34

Website : www.chandansteel.net

Email : cs@chandansteel.net

L/c. No.:

L/c. Date:

WORKS PLOT NO. 31 TO 36, AS/AG/AB, & 49/2/143

(EXP. AREA) GIDC, LIMBERGAON & SURVEY NO. 102/2 & 3 VILLAGE,

DEHARI, TALUKA: UMBERGAON, DIST: VALSAD, GUJARAT - 396171

GSTIN - 24AAAAC0713B1 ZG

F824 QC 09A / 02 / 10.12.2012

MILL TEST / INSPECTION CERTIFICATE 3.1

ACCORDING TO EN 10204 : 2005

Consignee						Test Certificate No. : EXP/01152 - 08/2017-2018					
						Date of Issue : 03.01.2018					
						P. O. No. : MN5942					
						SC No. & Date : 17-18/00447, Dt. 08.11.2017					
						Invoice No. & Date : EXP/01152/2017-18 Dt. 03.01.2019					
PRODUCT DESCRIPTION STAINLESS STEEL ROUND BARS						LENGTH		Net Wt.			
						Ordered	Actual	4680 Lbs.			
						12' - 14'	12' - 14'				
Heat No.	Grade AISI	Size mm/inches	Tolerance	Process Route							
1712154	304L	1/2"	h9	Electric Melting, A.O.D. Refining, Continuous Casting							
CHEMICAL COMPOSITION (Weight %)											
	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Ti	N
Min.	-	-	-	-	-	18.00	-	8.00	-	-	-
Max.	0.030	1.00	2.00	0.045	0.030	20.00	-	12.00	-	-	-
Results	0.028	0.33	1.56	0.038	0.008	18.02	-	8.02	-	-	-
MECHANICAL PROPERTIES											
Specified	Yield Strength		Tensile Strength		Elongation		Reduction of Area		Hardness		
Value	N/mm ² /MPa (Rp0.2)		N/mm ² /MPa (Rm)		%		%		(HB)		
Min.	310		620		30		40		-		
Max.	-		-		-		-		-		
Results	534		737		38		65		229-232		
Remarks:											
1. Cold drawn & Centreless Ground.											
2. Solution annealed at 1050 °C.											
3. PMI test done 100% & found Satisfactory.											
4. Material is free from radio-active contamination.											
5. Inter-Granular Corrosion Test as per ASTM A262 - 15 (Pr.E) satisfactory.											
6. The material conforms to ASTM A276-15/A182-15/A479-15 & ASME SA479-13 Specifications.											
7. Location of sample - Centre, Direction - Longitudinal, Test Temp - Room Temp., Shape of Test Piece - Round.											
8. Marking details - Company Logo, Size, Grade & Heat No.											
9. The material is manufactured/melt in Chandan Steel Mill and is of Indian Origin.											
10. No welding/weld repairs was performed on this material.											
BUNDLE NO.: 32, 33, 35 & 36											

It is hereby certified that the above results are true and correct in every details and are meeting the requirements of specification & purchase order.

B. S. RAUTELA
MANAGER - QUALITY ASSURANCE



Entered: _____

Date: _____

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐



Job: _____ Part No. _____		DISPOSITION			DEPARTMENT/PROCESS										
		Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/>			Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Large Fab <input type="checkbox"/>		Cross tube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/>		Eng. (Non-AW) <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/>		Engineering <input type="checkbox"/> Water Jet <input type="checkbox"/> Supplier <input type="checkbox"/> Quality <input type="checkbox"/>				
Date :	Sequence #:	QTY Affected :		MRB (QSI042)											
Description Work Order Deviation				Disposition											
Root Cause Operator <input type="checkbox"/> Manufacturing Process <input type="checkbox"/> Equip/Tooling <input type="checkbox"/> Handling/Preservation <input type="checkbox"/> Material <input type="checkbox"/> Product Improvement <input type="checkbox"/> Process Improvement <input type="checkbox"/> Human Factors <input type="checkbox"/>				FAULT CATEGORY											
				<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Bending <input type="checkbox"/> Crushing <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave/Twist <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Mislabeled Other/Details: _____				<input type="checkbox"/> Contamination <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Incomplete/Unclear Instructions <input type="checkbox"/> Drill Holes <input type="checkbox"/> Fit/Function				<input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain Direction <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Off-set/Set-up			
				<input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Outside Tolerance <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Misread											
				Completed By _____											
				Lead hand / Supervisor _____											
				QC / QA Coordinator _____											